

What is claimed is:

1. A resin molded article having a spring structure, comprising a three-dimensional structure with voids at a predetermined bulk density, said three-dimensional structure being formed by contacting, entwining, and gathering adjacent ones of random loops or curls of solid and/or hollow continuous filaments and/or short filaments made from a mixture of a polyolefin resin and VAC, EVA or SBS, wherein said three-dimensional structure is increased in bulk density in a direction of width thereof, at appropriate space intervals in a direction of length thereof.

2. The resin molded article according to claim 1, wherein said three-dimensional structure has voids providing low and high densities.

3. The resin molded article according to claim 1, a mixture ratio of said polyolefin resin to said VAC or said EVA is 70 to 97 wt% to 3 to 30 wt%.

4. The resin molded article according to claim 2, a mixture ratio of said polyolefin resin to said VAC or said EVA is 70 to 97 wt% to 3 to 30 wt%.

5. The resin molded article according to claim 1, a mixture ratio of said polyolefin resin to said VAC or said EVA is 80 to 90 wt% to 10 to 20 wt%.

6. The resin molded article according to claim 2, a mixture ratio of said polyolefin resin to said VAC or said EVA is 80 to 90 wt% to 10 to 20 wt%.

7. The resin molded article according to claim 1, wherein a mixture ratio of said polyolefin resin to said SBS is 50 to 97 wt% to 3 to 50 wt%.

8. The resin molded article according to claim 2, wherein a mixture ratio of said polyolefin resin to said SBS is 50 to 97 wt% to 3 to 50 wt%.

9. The resin molded article according to claim 3, wherein a mixture ratio of said polyolefin resin to said SBS is 50 to 97 wt% to 3 to 50 wt%.

10. The resin molded article according to claim 1, wherein a mixture ratio of

said polyolefin resin to said SBS is 70 to 90 wt% to 10 to 30 wt%.

11. The resin molded article according to claim 2, wherein a mixture ratio of said polyolefin resin to said SBS is 70 to 90 wt% to 10 to 30 wt%.

12. The resin molded article according to claim 3, wherein a mixture ratio of said polyolefin resin to said SBS is 70 to 90 wt% to 10 to 30 wt%.

13. The resin molded article according to claim 1, wherein said solid continuous filaments and/or short filaments have a diameter of 0.3 mm to 3.0 mm, preferably 0.7 to 1.0 mm, and said hollow continuous filaments and/or short filaments have a diameter of 1.0 mm to 3.0 mm.

14. The resin molded article according to claim 2, wherein said solid continuous filaments and/or short filaments have a diameter of 0.3 mm to 3.0 mm, preferably 0.7 to 1.0 mm, and said hollow continuous filaments and/or short filaments have a diameter of 1.0 mm to 3.0 mm.

15. The resin molded article according to claim 1, wherein said solid continuous filaments and/or short filaments have a diameter of 0.3 mm to 3.0 mm, preferably 0.7 to 1.0 mm, and said hollow continuous filaments and/or short filaments have a diameter of 1.5 to 2.0 mm.

16. The resin molded article according to claim 2, wherein said solid continuous filaments and/or short filaments have a diameter of 0.3 mm to 3.0 mm, preferably 0.7 to 1.0 mm, and said hollow continuous filaments and/or short filaments have a diameter of 1.5 to 2.0 mm.

17. The resin molded article according to claim 1, wherein said three-dimensional structure has a bulk density of 0.001 to 0.08 g/cm<sup>3</sup>.

18. The resin molded article according to claim 2, wherein said three-dimensional structure has a bulk density of 0.001 to 0.08 g/cm<sup>3</sup>.

19. The resin molded article according to claim 3, wherein said three-dimensional structure has a bulk density of 0.001 to 0.08 g/cm<sup>3</sup>.

20. The resin molded article according to claim 4, wherein said three-dimensional structure has a bulk density of 0.001 to 0.08 g/cm<sup>3</sup>.

21. The resin molded article according to claim 5, wherein said three-dimensional structure has a bulk density of 0.001 to 0.08 g/cm<sup>3</sup>.

22. The resin molded article according to claim 1, wherein said three-dimensional structure has a bulk density of 0.02 to 0.06 g/cm<sup>3</sup>.

23. The resin molded article according to claim 2, wherein said three-dimensional structure has a bulk density of 0.02 to 0.06 g/cm<sup>3</sup>.

24. The resin molded article according to claim 3, wherein said three-dimensional structure has a bulk density of 0.02 to 0.06 g/cm<sup>3</sup>.

25. The resin molded article according to any one of claim 4, wherein said three-dimensional structure has a bulk density of 0.02 to 0.06 g/cm<sup>3</sup>.

26. The resin molded article according to claim 5, wherein said three-dimensional structure has a bulk density of 0.02 to 0.06 g/cm<sup>3</sup>.

27. The resin molded article according to claim 1, wherein said three-dimensional structure is a cushion material for seats of an automotive vehicle or a bed.

28. The resin molded article according to claim 2, wherein said three-dimensional structure is a cushion material for seats of an automotive vehicle or a bed.

29. The resin molded article according to claim 3, wherein said three-dimensional structure is a cushion material for seats of an automotive vehicle or a bed.

30. The resin molded article according to claim 4, wherein said three-dimensional structure is a cushion material for seats of an automotive vehicle or a bed.

31. The resin molded article according to claim 5, wherein said

three-dimensional structure is a cushion material for seats of an automotive vehicle or a bed.

32. The resin molded article according to claim 6, wherein said three-dimensional structure is a cushion material for seats of an automotive vehicle or a bed.

33. A method of producing a resin molded article having a spring structure, by melt-extruding a polyolefin resin into a plurality of filaments, and contacting, entwining and gathering adjacent ones of random loops or curls of continuous filaments, thereby forming a three-dimensional structure with voids at a predetermined bulk density, wherein a take-off speed for taking off the extruded continuous filaments is changed to thereby form high density portions having an increased bulk density which each extend in a direction of width of said three-dimensional structure and are arranged at appropriate space intervals in a direction of length of said three-dimensional structure.

34. The resin molded article according to claim 1, wherein said three-dimensional structure has a bulk density of 0.005 to 0.03 g/cm<sup>3</sup> at low density portions, and a bulk density of 0.03 to 0.08 g/cm<sup>3</sup> at high density portions.

35. The resin molded article according to claim 2, wherein said three-dimensional structure has a bulk density of 0.005 to 0.03 g/cm<sup>3</sup> at low density portions, and a bulk density of 0.03 to 0.08 g/cm<sup>3</sup> at high density portions.

36. The resin molded article according to claim 3, wherein said three-dimensional structure has a bulk density of 0.005 to 0.03 g/cm<sup>3</sup> at low density portions, and a bulk density of 0.03 to 0.08 g/cm<sup>3</sup> at high density portions.

37. The resin molded article according to claim 4, wherein said three-dimensional structure has a bulk density of 0.005 to 0.03 g/cm<sup>3</sup> at low density portions, and a bulk density of 0.03 to 0.08 g/cm<sup>3</sup> at high density portions.

38. The resin molded article according to claim 5, wherein said

three-dimensional structure has a bulk density of 0.005 to 0.03 g/cm<sup>3</sup> at low density portions, and a bulk density of 0.03 to 0.08 g/cm<sup>3</sup> at high density portions.

39. The resin molded article according to claim 1, wherein said three-dimensional structure has a bulk density of 0.008 to 0.03 g/cm<sup>3</sup> at low density portions, and a bulk density of 0.04 to 0.07 g/cm<sup>3</sup> at high density portions.

40. The resin molded article according to claim 2, wherein said three-dimensional structure has a bulk density of 0.008 to 0.03 g/cm<sup>3</sup> at low density portions, and a bulk density of 0.04 to 0.07 g/cm<sup>3</sup> at high density portions.

41. The resin molded article according to claim 3, wherein said three-dimensional structure has a bulk density of 0.008 to 0.03 g/cm<sup>3</sup> at low density portions, and a bulk density of 0.04 to 0.07 g/cm<sup>3</sup> at high density portions.

42. The resin molded article according to claim 4, wherein said three-dimensional structure has a bulk density of 0.008 to 0.03 g/cm<sup>3</sup> at low density portions, and a bulk density of 0.04 to 0.07 g/cm<sup>3</sup> at high density portions.

43. The resin molded article according to claim 5, wherein said three-dimensional structure has a bulk density of 0.008 to 0.03 g/cm<sup>3</sup> at low density portions, and a bulk density of 0.04 to 0.07 g/cm<sup>3</sup> at high density portions.

44. The resin molded article according to claim 1, wherein said three-dimensional structure has a bulk density of 0.01 to 0.03 g/cm<sup>3</sup> at low density portions, and a bulk density of 0.05 to 0.06 g/cm<sup>3</sup> at high density portions.

45. The resin molded article according to claim 2, wherein said three-dimensional structure has a bulk density of 0.01 to 0.03 g/cm<sup>3</sup> at low density portions, and a bulk density of 0.05 to 0.06 g/cm<sup>3</sup> at high density portions.

46. The resin molded article according to claim 3, wherein said three-dimensional structure has a bulk density of 0.01 to 0.03 g/cm<sup>3</sup> at low density portions, and a bulk density of 0.05 to 0.06 g/cm<sup>3</sup> at high density portions.

47. The resin molded article according to claim 4, wherein said

three-dimensional structure has a bulk density of 0.01 to 0.03 g/cm<sup>3</sup> at low density portions, and a bulk density of 0.05 to 0.06 g/cm<sup>3</sup> at high density portions.

48. The resin molded article according to claim 5, wherein said three-dimensional structure has a bulk density of 0.01 to 0.03 g/cm<sup>3</sup> at low density portions, and a bulk density of 0.05 to 0.06 g/cm<sup>3</sup> at high density portions.

49. The resin molded article according to claim 9, wherein said three-dimensional structure has a void ratio of 96 to 99 % at said low density portions, and a void ratio of 91 to 97 % at said high density portions.

50. The resin molded article according to claim 9, wherein said three-dimensional structure has a void ratio of 97 to 99 % at said low density portions, and a void ratio of preferably 92 to 96 % at said high density portions.

51. The resin molded article according to claim 9, wherein said three-dimensional structure has a void ratio of 97 to 98 % at said low density portions, and a void ratio of 93 to 94 % at said high density portions.

52. The resin molded article according to claim 1, wherein a mixture ratio of solid filaments to hollow filaments is 0 to 50 to 50 to 100.

53. The resin molded article according to claim 2, wherein a mixture ratio of solid filaments to hollow filaments is 0 to 50 to 50 to 100.

54. The resin molded article according to claim 3, wherein a mixture ratio of solid filaments to hollow filaments is 0 to 50 to 50 to 100.

55. The resin molded article according to claim 4, wherein a mixture ratio of solid filaments to hollow filaments is 0 to 50 to 50 to 100.

56. The resin molded article according to claim 5, wherein a mixture ratio of solid filaments to hollow filaments is 0 to 50 to 50 to 100.

57. The resin molded article according to claim 1, wherein outer surfaces of said hollow filaments are covered with solid filaments.

58. The resin molded article according to claim 2, wherein outer surfaces of

said hollow filaments are covered with solid filaments.

59. The resin molded article according to claim 3, wherein outer surfaces of said hollow filaments are covered with solid filaments.

60. The resin molded article according to claim 4, wherein outer surfaces of said hollow filaments are covered with solid filaments.

61. The resin molded article according to claim 5, wherein outer surfaces of said hollow filaments are covered with solid filaments.

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